

REMARKS

This application has been carefully reviewed in light of the Office Action dated January 9, 2003. Claims 1-3 and 5-7 remain pending in this application. Claims 1 and 6 are the independent claims. Favorable reconsideration is respectfully requested.

On the merits, the Office Action rejected Claims 1-2 and 5 under 35 U.S.C. § 103(a) as being unpatentable over Whitesides et al. (U.S. Patent No. 5,925,259; hereinafter "Whitesides") in view of Biebuyck et al. (U.S. Patent No. 5,935,359; hereinafter "Biebuyck"). The Office Action also rejected Claim 3 under 35 U.S.C. § 103(a) as being unpatentable over Hawker (U.S. Patent No. 6,413,578; hereinafter "Hawker") in view of Maracas et al. (U.S. Patent No. 5,937,758; hereinafter "Maracas"). The Office Action also rejected Claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Whitesides et al. (U.S. Patent No. 5,900,160; hereinafter "Whitesides I") in view of Biebuyck. The Office Action also rejected Claim 7 under 35 U.S.C. § 103(a) as being unpatentable over Whitesidesides I in view of Whitesides et al. (Article Soft Lithography Agnew. Chem. Int. Ed. 1998, v. 37, pages 551-575; hereinafter "Whitesides-Article"). Applicant respectfully submits that the pending claims are patentable for at least the following reasons.

Applicant's Claim 6 recites: "[a] A method of manufacturing a stamp (10) for use in a lithographic process, which stamp (10, 110) has a stamp body (5, 105) with a surface (4, 104) which coincides partly with the printing face (3, 103), comprising the steps of:

anisotropic etching of a surface (27) of a mold (20) into a patterned mold surface (29), such that a first recess (21) and a second recess (23) are created in the mold (20) with apertures in the original surface (27), which first recess (21) and a second recess (23) become narrower as its distance to the original surface (27) increases and has cross-sections parallel to the original surface (27) which, when projected perpendicularly on the original surface (27), lie within the aperture (41), and wherein the first and second recesses have different apertures, and

making a replica of the patterned mold surface (29) in a first body (105) with a patterned surface (104), wherein the replica contains structures of different sizes."

As stated in the Office Action, Whitesides fails to recite or suggest first and second recesses have different apertures. Rather, Whitesides only depicts and recites recesses with common apertures. The Office Action argues that the disclosed method of anisotropic etching will make a triangular etch of deeper proportion for larger area exposed to etch compared to a smaller area. Applicant respectfully requests proof of this assumption.

Applicant reiterates that, M.P.E.P. § 706.02(j) states:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Applicant respectfully believes that Biebuyck fails to provide suggestion to modify Whiteside's device structure to include apertures of multiple widths/depths, as well as reasonable expectation of success. The claim that the method of manufacturing a stamp of different apertures would be no different to one of ordinary skill in the art at the time of the invention lacks substantiation. Nowhere in the references is it stipulated how deeper proportioned depths will be obtained. In fact, Biebuyck depicts different sized apertures of the same depth. Thus the combination of Whitesides and Biebuyck cannot be properly made, as the latter reference teaches away from the former. Applicant respectfully submits that the § 103 rejection of Claim 6 additionally fails because no expectation of success exists, as the depth of the recesses in Biebuyck all have the same depth, albeit

differing apertures. Claim 6 is believed patentable for at least these reasons.

Applicant's Claim 1 recites, in pertinent part: "cross-sections of the first recess (11) parallel to the printing face (3), when projected perpendicularly on the printing face (3), lie within the aperture (15), and a third recess (13) with an aperture (17) in the printing face (3) and a depth perpendicular to the printing face that is greater than the depth of the first recess is present in the stamp body (5)..."

As stated in the Office Action, Whitesides fails to recite or suggest recesses of different apertures, especially third recess having an aperture at least five times the aperture of the first recess. Whitesides and Biebuyck fail to recite or suggest a third aperture with a depth greater than the first recess. The Office Action notes that Biebuyck (Fig. 2A) depicts apertures of different sizes. However, all the apertures of Biebuyck all have substantially the same depth. Fig. 10 of Biebuyck depicts recesses of different depths, however, narrower apertures correspond to larger depths, thus teaching away from Applicant's invention. Therefore, the combination of Whitesides and Biebuyck fail to recite or suggest every limitation of Applicant's Claim 1.

Claims 2-3, 5, and 7 depend from one or another of the independent claims discussed above and are believed patentable for at least the same reasons. In addition, Applicant respectfully

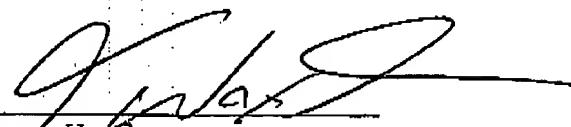
believes Claims 2-3, 5, and 7 to be independently patentable and request separate consideration of each claim. Applicant further believes the § 103 rejections of Claims 3 and 7 to be moot in light of the above remarks and requests their withdrawal. Additionally, In response to the § 103 rejection of Claim 3, Hawker fails to recite or suggest a third recess with an aperture that is at least five times the dimension of aperture of the first recess and at least one of the recesses having a triangular shape. Fig. 1 of Hawker clearly depicts a rectangular or polygonal shape in a plane perpendicular to the printing face, as more than three angles can be made from the angles formed by the aperture 14 and the stamp 10. Thus Hawker fails to recite or suggest this feature of Applicant's Claim 3. Further, Claim 3 depends from Claim 1, and since the Office Action contains no rejection of Claim 1 over Hawker and/or Maracas, Applicant respectfully traverses the rejection of Claim 3 due to its dependency on Claim 1.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

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Applicant's undersigned attorney may be reached by telephone at the number given below.

Respectfully submitted,

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